IN THE CLAIMS:

Please amend the claims as follows:

Claims 1 to 3 (Cancelled)

4. (Currently Amended) A method, including

determining a first set of values for at least one parameter in a communication system, said parameters being associated with a plurality of layers of an OSI model communication system;

communicating over ~~using~~ said communication system responsive to ~~using~~ said first set of values;

obtaining characteristics of said communication system in response to said first set of values;

determining a second set of values for said at least one parameter by adjusting a plurality of said first set of values in conjunction in response to said characteristics; and

communicating over ~~using~~ said communication system responsive ~~in response~~ to said second set of values.

5. (Previously Presented) A method as in claim 4, wherein said adjusting includes dynamically selecting said second set of values in response to said characteristics, said second set

of values including at least two changes to said at least one parameter, said second set of values having been determined to be superior to a set of altered values having only one change to said parameters.

6. (Original) A method as in claim 4, wherein said parameters includes at least one of: a payload element size, a message size value, a set of acknowledgment and retransmission values, a TDD duty cycle value.

7. (Original) A method as in claim 4, wherein said at least one parameter includes at least two of: an antenna selection value, a power level value, a channel selection value, a modulation type value, a symbol rate value, an error code type value, a set of equalization values.

8. (Original) A method as in claim 4, wherein said communication system includes a plurality of distinguishable channels, said channels being distinguished using at least one of: frequency division, time division, space division, spread spectrum code division.

9. (Original) A method as in claim 4, wherein said communication system includes a plurality of distinguishable channels, said channels being distinguished using at least two of: frequency division, time division, space division, spread spectrum code division.

10. (Original) A method as in claim 4, wherein said communication system includes a wireless communication link.

11. (Original) A method as in claim 4, wherein said communication system is subject to at least one of: interference effects, multipath effects, both interference effects and multipath effects.

12. (Original) A method as in claim 4, wherein said plurality of layers include at least one of: a physical layer, a media access layer, a network layer, a transport layer, an application layer.

13. (Original) A method as in claim 4, wherein said adjusting includes adaptively calculating a newer set of said values for said communication link in response to a combination of an older set of said values and an adjusted set of said values.

14. (Currently Amended) A method as ~~is~~ in claim 13, wherein said combination is responsive to a hysteresis parameter.

15. (Original) A method as in claim 4, wherein said adjusting is responsive to a type of protocol being used by at least one of the group: a physical layer, a media access layer, a network layer, a transport layer, an application layer.

16. (Original) A method as in claim 15, wherein said adjusting is responsive to whether an application layer protocol includes asymmetric transfer of information.

17. (Original) A method as in claim 15, wherein said adjusting is responsive to whether an application layer protocol includes voice or video information.

Claims 18 to 34 (Cancelled)

35. (Original) A method, including

optimizing a plurality of communication parameters in a point-to-multipoint communication system, said optimization including time-varying adjustment of said plurality of communication parameters for a set of independent communication channels in said communication system, said time-varying adjustment being responsive to at least one of statistical or time-varying aspects of each said communication channel;

wherein said time-varying adjustment is independent with regard to each said independent communication channel;

wherein said communication parameters are effective to alter aspects of each said independent communication channel with regard to frequency-variation, spatial-variation, or time-variation of each said independent communication channel.

36. (Original) A method as in claim 35, wherein said communication parameters include antenna allocation, power allocation, channel allocation, modulation allocation, rate allocation, error code allocation, equalization parameter allocation, payload size allocation, ARQ allocation, or TDD framing allocation.

37. (Original) A method as in claim 35, wherein said optimizing includes adjusting a plurality of said parameters; whereby an effect of adjusting one of said parameters is maximized.

38. (Original) A method as in claim 35, wherein said optimizing includes adjusting a plurality of said parameters; whereby an effect of adjusting said parameters includes a decrease in intersymbol interference, intrasymbol interference, or transmission latency.

39. (Original) A method as in claim 35, wherein said optimizing includes selecting a set of limits for capacity and coverage of a communication system, said communication system including a base station controller and at least one customer premises equipment.

40. (Original) A method as in claim 35, wherein said optimizing includes selection with regard to optimal performance for each one of a plurality of individual communication links, in response to separate conditions for each said individual communication

links, said conditions including interference conditions, multipath conditions, or combinations of interference conditions and multipath conditions.

41. (Original) A method as in claim 35, wherein said optimizing is responsive, for individual communication links, to optimal performance using an uplink path and a downlink path, said uplink path and said downlink path being operative in a duplex communication system having a base station controller and customer premises equipment.

42. (Original) A method as in claim 35, wherein said optimizing is responsive, for individual communication links, to time-bounded services, voice application services, or video application services.

43. (Original) A method as in claim 35, wherein said set of parameters includes at least one MAC layer parameter, said at least one MAC layer parameter including payload size allocation, ARQ allocation, or TDD framing allocation.

44. (Original) A method as in claim 35, wherein said set of parameters includes at least one physical layer parameter, said at least one physical layer parameter including antenna location, power allocation, channel allocation, modulation allocation, rate allocation, error coding, or equalization parameters.

45. (Original) A method as in claim 35, wherein said time-varying adjustment is operative to simultaneously adjust multiple ones of said plurality in an integrated manner; so as to obtain an optimal set of said communication parameters.

46. (Original) A method as in claim 35, wherein said time-varying adjustment is responsive to a set of quality of service application requirements.

Cl Cont.

47. (Original) A method as in claim 35, wherein said time-varying adjustment is responsive to a set of time delays or time variations for application service latency.

48. (Original) A method as in claim 35, wherein said time-varying adjustment is responsive to a type of application service, including being responsive to voice services or video services.

49. (Original) A method as in claim 35, wherein said time-varying adjustment is responsive to at least one of: intersymbol interference, intrasymbol interference, fading.

50. (Original) A method, including

optimizing a set of parameters for a communication channel, said parameters including time-varying, frequency-varying, or spatially-varying parameters for said communication channel;

wherein said steps of optimizing include adjusting said set of parameters in an integrated manner for optimal performance, said optimal performance being responsive to interference conditions, multipath conditions, or combinations of interference conditions and multipath conditions.

Cont.

51. (Original) A method as in claim 50, wherein said communication channel is subject to modulation using a plurality of: spatial separation of communication links, frequency separation of communication links, or time separation of communication links.

52. (Original) A method as in claim 50, wherein said performance includes responsiveness to a plurality of: multipath conditions, interference conditions.

53. (Original) A method as in claim 50, wherein said performance includes responsiveness to individual requirements for time bounded services, said time bounded services possibly including voice communication or video communication.

54. (Original) A method as in claim 50, wherein said performance includes responsiveness to requests for communication bandwidth using an uplink and a downlink.

55. (Original) A method as in claim 54, wherein said uplink and said downlink are responsive to communication between a base station controller and at least one customer premises equipment.

56. (Original) A method as in claim 54, wherein said uplink and said downlink are responsive to asymmetrical requests for communication bandwidth.

Cl Cont.

57. (Original) A method as in claim 54, wherein said uplink and said downlink are responsive to control using separate sets of said plurality of parameters.

58. (Original) A method, including

sending information in a system having a plurality of traffic flows, each said traffic flow having a link speed associated therewith, said link speeds possibly being different for differing traffic flows;

scheduling sending of said information using said plurality of traffic flows in response to said differing link speeds.

Claim 59 (Cancelled)

60. (New) A device, comprising:

wireless communication equipment for a communication system;

a processor that executes instructions to control communication over said communication system; and

memory that stores information including said instructions, the instructions including the steps of: (a) determining a first set of values for at least one parameter in said communication system, said parameters being associated with a plurality of layers of an OSI model communication system, (b) communicating over said communication system responsive to said first set of values, (c) obtaining characteristics of said communication system in response to said first set of values, (d) determining a second set of values for said at least one parameter by adjusting a plurality of said first set of values in conjunction in response to said characteristics, and (e) communicating over said communication system responsive to said second set of values.

Cont.

61. (New) A device as in claim 60, wherein said adjusting includes dynamically selecting said second set of values in response to said characteristics, said second set of values including at least two changes to said at least one parameter, said second set of values having been determined to be superior to a set of altered values having only one change to said parameters.

62. (New) A device as in claim 60, wherein said parameters includes at least one of: a payload element size, a message size value, a set of acknowledgment and retransmission values, a TDD duty cycle value.

63. (New) A device as in claim 60, wherein said at least one parameter includes at least two of: an antenna selection value, a power level value, a channel selection value, a modulation type value, a symbol rate value, an error code type value, a set of equalization values.

64. (New) A device as in claim 60, wherein said communication system includes a plurality of distinguishable channels, said channels being distinguished using at least one of: frequency division, time division, space division, spread spectrum code division.

Cl Cont.

65. (New) A device as in claim 60, wherein said communication system includes a plurality of distinguishable channels, said channels being distinguished using at least two of: frequency division, time division, space division, spread spectrum code division.

66. (New) A device as in claim 60, wherein said communication system includes a wireless communication link.

67. (New) A device as in claim 60, wherein said communication system is subject to at least one of: interference effects, multipath effects, both interference effects and multipath effects.

68. (New) A device as in claim 60, wherein said plurality of layers include at least one of: a physical layer, a media access layer, a network layer, a transport layer, an application layer.

69. (New) A device as in claim 60, wherein said adjusting includes adaptively calculating a newer set of said values for said communication link in response to a combination of an older set of said values and an adjusted set of said values.

Cont.

70. (New) A device as in claim 69, wherein said combination is responsive to a hysteresis parameter.

71. (New) A device as in claim 60, wherein said adjusting is responsive to a type of protocol being used by at least one of the group: a physical layer, a media access layer, a network layer, a transport layer, an application layer.

72. (New) A device as in claim 71, wherein said adjusting is responsive to whether an application layer protocol includes asymmetric transfer of information.

73. (New) A device as in claim 71, wherein said adjusting is responsive to whether an application layer protocol includes voice or video information.

74. (New) A device, comprising:

wireless communication equipment for a point-to-multipoint communication system;

a processor that executes instructions to control communication over said communication system; and

memory that stores information including said instructions, the instructions including the steps of optimizing a plurality of communication parameters in said communication system, said optimization including time-varying adjustment of said plurality of communication parameters for a set of independent communication channels in said communication system, said time-varying adjustment being responsive to at least one of statistical or time-varying aspects of each said communication channel;

wherein said time-varying adjustment is independent with regard to each said independent communication channel;

wherein said communication parameters are effective to alter aspects of each said independent communication channel with regard to frequency-variation, spatial-variation, or time-variation of each said independent communication channel.

75. (New) A device as in claim 74, wherein said communication parameters include antenna allocation, power allocation, channel allocation, modulation allocation, rate allocation, error code allocation, equalization parameter allocation, payload size allocation, ARQ allocation, or TDD framing allocation.

76. (New) A device as in claim 74, wherein said optimizing includes adjusting a plurality of said parameters; whereby an effect of adjusting one of said parameters is maximized.

77. (New) A device as in claim 74, wherein said optimizing includes adjusting a plurality of said parameters; whereby an effect of adjusting said parameters includes a decrease in intersymbol interference, intrasymbol interference, or transmission latency.

78. (New) A device as in claim 74, wherein said optimizing includes selecting a set of limits for capacity and coverage of a communication system, said communication system including a base station controller and at least one customer premises equipment.

79. (New) A device as in claim 74, wherein said optimizing includes selection with regard to optimal performance for each one of a plurality of individual communication links, in response to separate conditions for each said individual communication links, said conditions including interference conditions, multipath conditions, or combinations of interference conditions and multipath conditions.

80. (New) A device as in claim 74, wherein said optimizing is responsive, for individual communication links, to optimal performance using an uplink path and a downlink path, said uplink path and said downlink path being operative in a duplex communication system having a base station controller and customer premises equipment.

81. (New) A device as in claim 74, wherein said optimizing is responsive, for individual communication links, to time-bounded services, voice application services, or video application services.

82. (New) A device as in claim 74, wherein said set of parameters includes at least one MAC layer parameter, said at least one MAC layer parameter including payload size allocation, ARQ allocation, or TDD framing allocation.

Cont.

83. (New) A device as in claim 74, wherein said set of parameters includes at least one physical layer parameter, said at least one physical layer parameter including antenna location, power allocation, channel allocation, modulation allocation, rate allocation, error coding, or equalization parameters.

84. (New) A device as in claim 74, wherein said time-varying adjustment is operative to simultaneously adjust multiple ones of said plurality in an integrated manner; so as to obtain an optimal set of said communication parameters.

85. (New) A device as in claim 74, wherein said time-varying adjustment is responsive to a set of quality of service application requirements.

86. (New) A device as in claim 74, wherein said time-varying adjustment is responsive to a set of time delays or time variations for application service latency.

87. (New) A device as in claim 74, wherein said time-varying adjustment is responsive to a type of application service, including being responsive to voice services or video services.

Cont.

88. (New) A device as in claim 74, wherein said time-varying adjustment is responsive to at least one of: intersymbol interference, intrasymbol interference, fading.

89. (New) A device, comprising:

wireless communication equipment for a communication channel;

a processor that executes instructions to control communication over said communication channel; and

memory that stores information including said instructions, the instructions including the steps of optimizing a set of parameters for said communication channel, said parameters including time-varying, frequency-varying, or spatially-varying parameters for said communication channel;

wherein said steps of optimizing include adjusting said set of parameters in an integrated manner for optimal performance, said optimal performance being responsive to

interference conditions, multipath conditions, or combinations of interference conditions and multipath conditions.

90. (New) A device as in claim 89, wherein said communication channel is subject to modulation using a plurality of: spatial separation of communication links, frequency separation of communication links, or time separation of communication links.

91. (New) A device as in claim 89, wherein said performance includes responsiveness to a plurality of: multipath conditions, interference conditions.

92. (New) A device as in claim 89, wherein said performance includes responsiveness to individual requirements for time bounded services, said time bounded services possibly including voice communication or video communication.

93. (New) A device as in claim 89, wherein said performance includes responsiveness to requests for communication bandwidth using an uplink and a downlink.

94. (New) A device as in claim 93, wherein said uplink and said downlink are responsive to communication between a base station controller and at least one customer premises equipment.

95. (New) A device as in claim 93, wherein said uplink and said downlink are responsive to asymmetrical requests for communication bandwidth.

96. (New) A device as in claim 93, wherein said uplink and said downlink are responsive to control using separate sets of said plurality of parameters.

Cl Cont.

97. (New) A device, comprising:

communication equipment for a system having a plurality of traffic flows;

a processor that executes instructions to control communication over said system; and

memory that stores information including said instructions, the instructions including the steps of (a) sending information in said system having said plurality of traffic flows, each said traffic flow having a link speed associated therewith, said link speeds possibly being different for differing traffic flows, and (b) scheduling sending of said information using said plurality of traffic flows in response to said differing link speeds.